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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,485	02/07/2006	Matthias Illing	081276-1071-00	8675

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MICHAEL BEST & FRIEDRICH, LLP
100 E WISCONSIN AVENUE
Suite 3300
MILWAUKEE, WI 53202

EXAMINER

MILLER, SAMANTHA A

ART UNIT	PAPER NUMBER
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3749

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/567,485	Applicant(s) ILLING ET AL.	
	Examiner Samantha A. Miller	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/31/2006, 2/7/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **the passenger compartment, control unit, analog or digital interface, a structural unit, and cooling heating device** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure:

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) **CROSS-REFERENCE TO RELATED APPLICATIONS.**
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.

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(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

Claims 14-20 objected to because of the following informalities: They depend on Claim 11, which is an apparatus, but are introduced as method claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10-11, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Chatterjee (6,471,136). Chatterjee teaches in the specification and Figs. 1-2 an invention in the same field of endeavor as applicant's invention that is described in the applicant's claims.

Chatterjee teaches:

1. To regulate a circulating air and/or intake air portion (60, 70) in a passenger compartment of a vehicle, in particular a motor vehicle (col.5 ll.1-8), with a sensor (10) for detecting hazardous gas concentrations in the passenger compartment and for supplying a triggering signal of a control unit (100) for the circulating air and/or intake air portion in a passenger compartment (col.4 ll.51-65), characterized in that the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature measured by the sensor for temperature compensation of the sensor for detecting the hazardous gas concentration is used to regulate the circulating air and/or intake air portion in the passenger compartment (col.7 ll.45-49 and col.4 ll.51-65).

2. The control unit (100) for the circulating air and/or intake air portion induces the supply of the passenger compartment in an alternating manner with either exclusively circulating air (col.5 ll.1-8) or exclusively intake air (60) as a function of exceeding or falling short of a hazardous gas concentration threshold value (col.4 ll.50-65).

3. The control unit (100) for the circulating air and/or intake air portion (60, 70) controls the size of the circulating air portion in the passenger compartment of the vehicle (col.4 l.50 –col.5 l.8).

4. The size of the circulating air portion in the passenger compartment controlled by the control unit moves in a pre-definable range of a tolerable hazardous gas concentration in the passenger compartment (col.4 ll.37-65).

5. The control unit (100) for the circulating air and/or intake air portion (60, 70) increases the circulating air portion in the passenger compartment when there is an increase in the outside temperature of the passenger compartment (being a control climate system with the option of a temperature sensor (30) as the temperature outside increases the indoor temperature will increase as well this will trigger the temperature sensor to change the signal to controller (100) that will send signal (9) to actuate the vent door (122), col.4 ll.50-65 and col.7 ll.45-50)

6. The control unit for the circulating air and/or intake air portion (60, 70) is a part of a cooling/heating device (82) (col.4 ll.26-32).

7. The sensor for detecting hazardous gas concentrations detects the carbon dioxide concentration in the passenger compartment (col.7 ll.45-50).

10. The sensor for detecting hazardous gas concentrations communicates with the control unit (100) for the circulating air and/or intake air portion (60, 70) via an analog or a digital interface (measures voltage signals through interface (40), col.4 ll.9-11 and 50-65).

11. A Sensor for regulating a circulating air and/or intake air portion (60, 70) in a passenger compartment of a motor vehicle, the sensor detecting hazardous gas concentrations in the passenger compartment and supplying a triggering signal (9) of a control unit (100) for the circulating air and/or intake air portion in the passenger compartment (122) (col.4 ll.50-65), characterized in that the sensor is a temperature-compensated sensor, whereby, in addition to the hazardous gas concentration measured by the sensor, the temperature (col.7 ll.45-60) measured by the sensor for temperature compensation of the sensor for detecting the hazardous gas concentration is used to regulate the circulating air and/or intake air portion in the passenger compartment, characterized in that the CO₂ concentration in the passenger compartment (col.7 ll.45-50) is measured by the sensor via a wavelength-specific weakening of electromagnetic radiation in the infrared range (CO₂ wavelength is in the infrared range which is then sensed by the biosensor with fiber optic probes, col.6 ll.10-23).

13. The sensor for detecting hazardous gas concentrations in the passenger compartment and the sensor for temperature compensation form a structural unit (Fig.1 and 2).

14. The control unit for the circulating air and/or intake air portion (60, 70) induces the supply of the passenger compartment in an alternating manner with either exclusively circulating air or exclusively intake air as a function of exceeding or falling short of a hazardous gas concentration threshold value (col.4 ll.50-65).

15. The control unit for the circulating air and/or intake air portion controls the size of the circulating air portion in the passenger compartment of the vehicle (through control climate unit 82 and set value of controller, col.4 ll.26-32 and 50-65).

16. The size (set value) of the circulating air portion in the passenger compartment controlled by the control unit moves in a pre- definable range (in excess of set value) of a tolerable hazardous gas concentration in the passenger compartment (col.4 ll.50-65).

17. The control unit for the circulating air and/or intake air portion increases the circulating air portion in the passenger compartment when there is an increase in the outside temperature of the passenger compartment (being a control climate system with the option of a temperature sensor (30) as the temperature outside increases the indoor temperature will increase as well this will trigger the temperature sensor to change the signal to controller (100) that will send signal (9) to actuate the vent door (122), col.4 ll.50-65 and col.7 ll.45-50).

18. The control unit for the circulating air and/or intake air portion is a part of a cooling/heating device (82) (col.4 ll.26-32).

Claim Rejections - 35 USC § 103

Claims 8-9, 12, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatterjee in view of being optimum values.

These optimum values are taught in the following reference:

A. Dussault (5,261,415) teaches:

12. The carbon dioxide concentration is measured by the sensor at wavelengths between 4.2 μm and 4.3 μm (optimum range for CO.sub.2, col.2 ll.44-50) and a reference wavelength between 3.8 μm and 4.0 μm (reference wavelength determined to fit detector used being a optimum value, col.3 ll.10-20).

B. Wood (5,892,140) teaches:

8. The hazardous gas concentration threshold value in the passenger compartment is selected at 0.2% by volume CO₂ (taught as optimum value col.2 ll.13-16).

19. The hazardous gas concentration threshold value in the passenger compartment is selected at 0.2% by volume CO₂ (taught as optimum value col.2 ll.13-16).

C. Chatterjee teaches:

9. The control unit for the circulating air and/or intake air portion adjusts the circulating air portion in the passenger compartment to approx. 80% when a person is located in the passenger compartment (optimum value that can be set by passenger, col.4 ll.26-32 and 50-65).

20. The control unit for the circulating air and/or intake air portion (V_s , V_o) adjusts the circulating air portion (V_s) in the passenger compartment to approx. 80% when a person is located in the passenger compartment (optimum value that can be set by passenger, col.4 ll.26-32 and 50-65).

D. Therefore, it would have been obvious to a person having ordinary skills in the art at the time the invention was made to have modified the sensor of Chatterjee to have these ranges or values (3.8 to 4 μm , 0.2% by volume, and approximate 80%) since where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, MPEP § 2144.05.

Conclusion

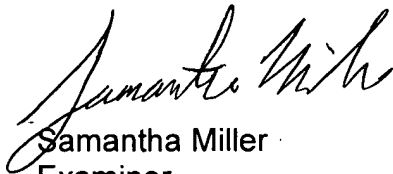
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. As listed on PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samantha A. Miller whose telephone number is 571-272 9967. The examiner can normally be reached on Monday - Thursday 9:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Rinehart can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Samantha Miller
Examiner
Art Unit 3749
2/12/2007


KENNETH RINEHART
PRIMARY EXAMINER